

REMARKS

Claims 1-31 are pending. The Office Action on its cover indicates that claims 1-13 are pending, and in its text only addresses claims 1-13. However, claims 14-24 were added by a Supplemental Preliminary Amendment filed December 3, 2001. Thus the new claims added by the present Amendment begin at claim number 25.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Claims 1-13 were rejected under 35 U.S.C. §112, second paragraph, on two grounds. The first ground was that the presence of the term "type" in claim 1 renders indefinite claim 1 and the claims depending from it. Applicants respectfully traverse this rejection on the grounds that one of ordinary skill in the art would have had no difficulty understanding the scope of the claims in view of the specification. However, in order to moot this rejection, claim 1 has been amended to delete the term "type" without in any way narrowing the scope of the claims. In addition, the same amendment has been made in claim 14 in order to avoid any further rejections on this basis.

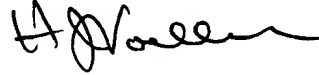
The second ground for rejection was that claims 5 and 6 recite preferred amounts, claims 7 and 9 include the phrase "for example", and claims 8 and 10-13 depend from the above claims. Claims 5, 6, 7 and 9 have been amended to remove the "preferred" and "for example" limitations, which have been transferred to new dependent claims. Again, similar changes have also been made in claims 17, 18 and 19. Thus it is respectfully submitted that the rejection has been overcome without any narrowing of the claims.

In view of the above amendments and remarks, reconsideration and withdrawal of the rejection under 35 U.S.C. §112, second paragraph, are respectfully requested.

It is respectfully submitted that claims 1-31 are in condition for allowance. Prompt issuance of a Notice of Allowance directed to claims 1-31 is respectfully requested.

Should the Examiner have any questions or comments concerning the application, she is respectfully invited to telephone the undersigned at the number set forth below.

Respectfully submitted,



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Attachment:
Appendix

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<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>

APPENDIX

Changes to Claims:

Claims 25-31 are added.

The following is a marked-up version of the amended claim(s):

1. (Amended) A halogen-free fire-retarded plastic composition suitable for coating a substrate, comprising an acrylic resin and an intumescent agent, ~~wherein~~characterized in that:

- ~~itsaid composition~~ is in the plastisol state and comprises a plasticizing medium in which the acrylic resin and the intumescent agent are dispersed;
- ~~itsaid composition~~ exhibits, at low shear rates, Newtonian-type rheological behavior with a viscosity of less than 6000 mPa.s; and
- ~~itsaid composition~~ exhibits, at high shear rates, pseudoplastic-type rheological behavior.

2. (Amended) The composition as claimed in claim 1, ~~characterized in that~~wherein the weight proportion of the plasticizing medium comprising a phthalate is at most equal to 200% with respect to the weight of acrylic resin and/or the weight proportion of the intumescent agent is at most equal to 200% with respect to the weight of acrylic resin.

3. (Amended) The composition as claimed in claim 1, ~~characterized in that~~wherein the plasticizing medium comprises predominantly, by weight, an organic phosphate.

4. (Amended) The composition as claimed in claim 3, ~~characterized in that~~wherein the plasticizing medium comprises a phthalate.

5. (Amended) The composition as claimed in claim 2, ~~characterized in that~~wherein the proportion by weight of the plasticizing medium is between 100 and 200%, ~~and preferably between 120 and 145%~~, by weight of resin.

6. (Amended) The composition as claimed in claim 2, ~~characterized in that wherein~~ the proportion by weight of the intumescent agent is between 50 and 200%, ~~and preferably between 150 and 200%~~, by weight of resin.

7. (Twice Amended) A flame-retarded composite yarn comprising a core made of a material of low combustibility, ~~for example a halogen-free material,~~ and a sheath made of resin, ~~characterized in that it~~ wherein said yarn is capable of being obtained by coating said core with the flame-retarded composition as claimed in claim 1.

8. (Amended) The yarn as claimed in claim 7, ~~characterized in that~~ wherein the material of the core is a continuous glass filament.

9. (Twice Amended) A composite structure comprising a substrate of low combustibility, ~~for example a halogen-free substrate,~~ and at least one layer of resin, ~~characterized in that it~~ wherein said structure is capable of being obtained by coating the substrate with a flame-retarded composition as claimed in claim 1.

14. (Amended) A process for obtaining a yarn comprising a core and a plastic sheath comprising a halogen-free fire-retarded composition, consisting of at least one acrylic resin and an intumescent agent which are dispersed in a plasticizing medium, which process is characterized in that:

- a) a die suitable for passage of the core of said yarn is used;
- b) the plastic composition is used in the ungelled plastisol state;
- c) the core of the yarn is passed through said die, with a peripheral distribution of the plastisol around said core;
- d) the rheological properties of the plastisol at the shear rate of the die, at least equal to $20,000 \text{ s}^{-1}$, are adapted by formulating said ungelled plastisol so that at low shear rate, at most equal to 400 s^{-1} , it exhibits a Newtonian-type behaviour, with a viscosity of

less than or equal to 6×10^3 mPa.s, measured with a Brookfield RVT viscometer at 20 rpm, and at high shear rate, at least equal to 10×10^3 s⁻¹, it exhibits a pseudoplastic-type behaviour;

e) the gelling of the fire-retarded composition is carried out.

15. (Amended) The process as claimed in claim 14, ~~characterized in that~~wherein the weight proportion of the plasticizing medium in the plastisol comprising a phthalate is at most equal to 200% with respect to the weight of acrylic resin and/or the weight proportion of the intumescent agent is at most equal to 200% with respect to the weight of acrylic resin.

16. (Amended) The process as claimed in claim 14, ~~characterized in that~~wherein the plasticizing medium comprises predominantly, by weight, an organic phosphate.

17. (Amended) The process as claimed in claim 14, ~~characterized in that~~wherein the proportion by weight of the plasticizing medium in the plastisol is between 100 and 200%, ~~and preferably between 120 and 145%~~, by weight of resin.

18. (Amended) The composition as claimed in claim 14, ~~characterized in that~~wherein the proportion by weight of the intumescent agent in the plastisol is between 50 and 200%, ~~and preferably between 150 and 200%~~, by weight of resin.

19. (Amended) A flame-retarded composite yarn with a sheath made of resin and of low combustibility, ~~for example a halogen-free material, characterized in that~~wherein it is capable of being obtained by the process as claimed in claim 14.

20. (Amended) The yarn as claimed in claim 19, ~~characterized in that~~wherein the material of the core is a continuous glass filament.